

allegedly being anticipated by Kimura et al (U.S. '851, hereinafter "Kimura"). Applicant respectfully traverses these rejections.

For a reference to anticipate a claim, each element must be found, either expressly or under principles of inherency, in the reference. Applicant respectfully submits that none of the above cited references (Yano, Mitarai, Inoue or Kimura) discloses each of the claimed limitations. For example, Applicant respectfully submits that none of the above cited references discloses an abutment member being made of a different material than a material constituting piezoelectric layers, the abutment member being in direct abutment with one of the piezoelectric layers without adhesive interposed between the abutment member and the one of the piezoelectric layers, as required by claim 1 and claims 2-7 which depend therefrom.

Mitarai has a U.S. filing date of November 2, 2001 which is after the filing of foreign priority application (Japan) 2000-400204 on December 28, 2000 from which the present U.S. application claims priority. While Applicant reserves the right to later file an English translation of foreign priority application no. (Japan) 2000-400204 to overcome the Mitarai reference, Applicant submits that Matari fails to disclose each element of the claimed invention. Matari discloses on col. 9, lines 57-58 a laminate body which is degreased at 400 to 700°C, in an electric furnace, and baked at 900 to 1200°C. Piezoelectric layers 131, 132 and piezoelectric layers 133 and 134 (the alleged abutment members) are each formed of piezoelectric material. Piezoelectric layers 131, 132 and dummy layers 133, 134 are baked and integrated with each

other. Mitarai therefore fails to disclose the material of the abutment member being made of a different material than the piezoelectric layers or the abutment member being directly joined to one of the piezoelectric layers without adhesive interposed therebetween.

Inoue discloses a piezoelectric device having piezoelectric layers 2 and dielectric layers 3. As disclosed in col. 8, lines 51-52, the dielectric layers are mounted on opposing ends of the piezoelectric layers by glue. Accordingly, Applicant submits that Inoue fails to disclose joining an abutment member directly to a piezoelectric layer without using any adhesive interposed between the abutment member and the piezoelectric layer.

Yano discloses laminations comprising sheets of electrode-distortion material 21 and electrodes 22 being enclosed within an insulating resin material 23. Yano fails to disclose an abutment member being in direct abutment with a piezoelectric layer without adhesive interposed between the abutment member and the piezoelectric layer.

Kimura discloses peripheral surfaces of a laminated piezoelectric element being coated with a layer 4 of fine ceramic particles. Kimura fails to disclose the alleged abutment member (not numbered) and the laminated piezoelectric element 1 being in direct abutment with each other without adhesive interposed between the abutment member and the piezoelectric element 1. Applicant submits that Kimura therefore fails to disclose each element of the claimed invention.

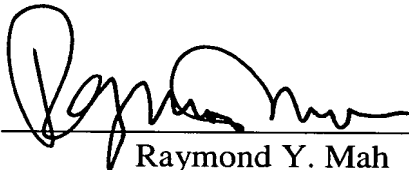
Accordingly, Applicant respectfully submits that none of Yano, Mitarai, Inoue or Kimura discloses each element of claim 1 and claims 2-7 which depend therefrom. Applicant therefore respectfully requests that the above rejections under 35 U.S.C. §102 be withdrawn.

Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Raymond Y. Mah
Reg. No. 41,426

RYM/sl
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703)816-4000
Facsimile: (703)816-4100

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Amended) A stacked-type piezoelectric device comprising:
a plurality of piezoelectric layers and electrode layers which are stacked
in alternate fashion, [said stacked-type piezoelectric device comprising;]

an abutment member which is brought into direct abutment with at least
one end face of [said] one of the piezoelectric [device] layers in a stretching
direction thereof, the abutment member being made of a different material than
the material of the piezoelectric layers;

a coating member having electric insulating properties which covers at
least part of the abutment portion between said abutment member and said one
of the piezoelectric [device] layers so that the state is maintained in which said
abutment member and said one of the piezoelectric [device] layers are in direct
abutment with each other without adhesive interposed between the abutment
member and said one of the piezoelectric layers.

3. (Amended) A stacked-type piezoelectric device as set forth in
Claim 1, wherein said abutment member[s have] has electrically insulating
properties.

4. (Amended) A stacked-type piezoelectric device as set forth in
Claim 1, wherein said coating member covers the full circumference of the

abutment portion between said one of the piezoelectric [device] layers and said abutment member[s].

5. (Amended) A stacked-type piezoelectric device as set forth in Claim 1, wherein the coating member covers the abutment portion between said one of the piezoelectric [device] layers and said abutment member[s] and the entire surface of the outer circumference of said piezoelectric [device] layers.

6. (Amended) A stacked-type piezoelectric device as set forth in Claim 1, [wherein] further comprising side electrodes [are] disposed on two opposed sides of said piezoelectric [device] layers, and wherein said coating member covers at least said side electrodes entirely.

PIEZOELECTRIC DEVICE AND METHOD FOR PRODUCING THE
SAME

ABSTRACT OF THE DISCLOSURE

A stacked piezoelectric device comprising a plurality of piezoelectric layers which are stacked one over another has an abutment member which is brought into direct abutment with at least one end face of one of the piezoelectric layers in a stretching direction and a coating member. The coating member has electrically insulating properties and covers an abutment portion between the abutment member and the piezoelectric layers so that the abutment condition of the abutment member and the piezoelectric layers can be maintained.